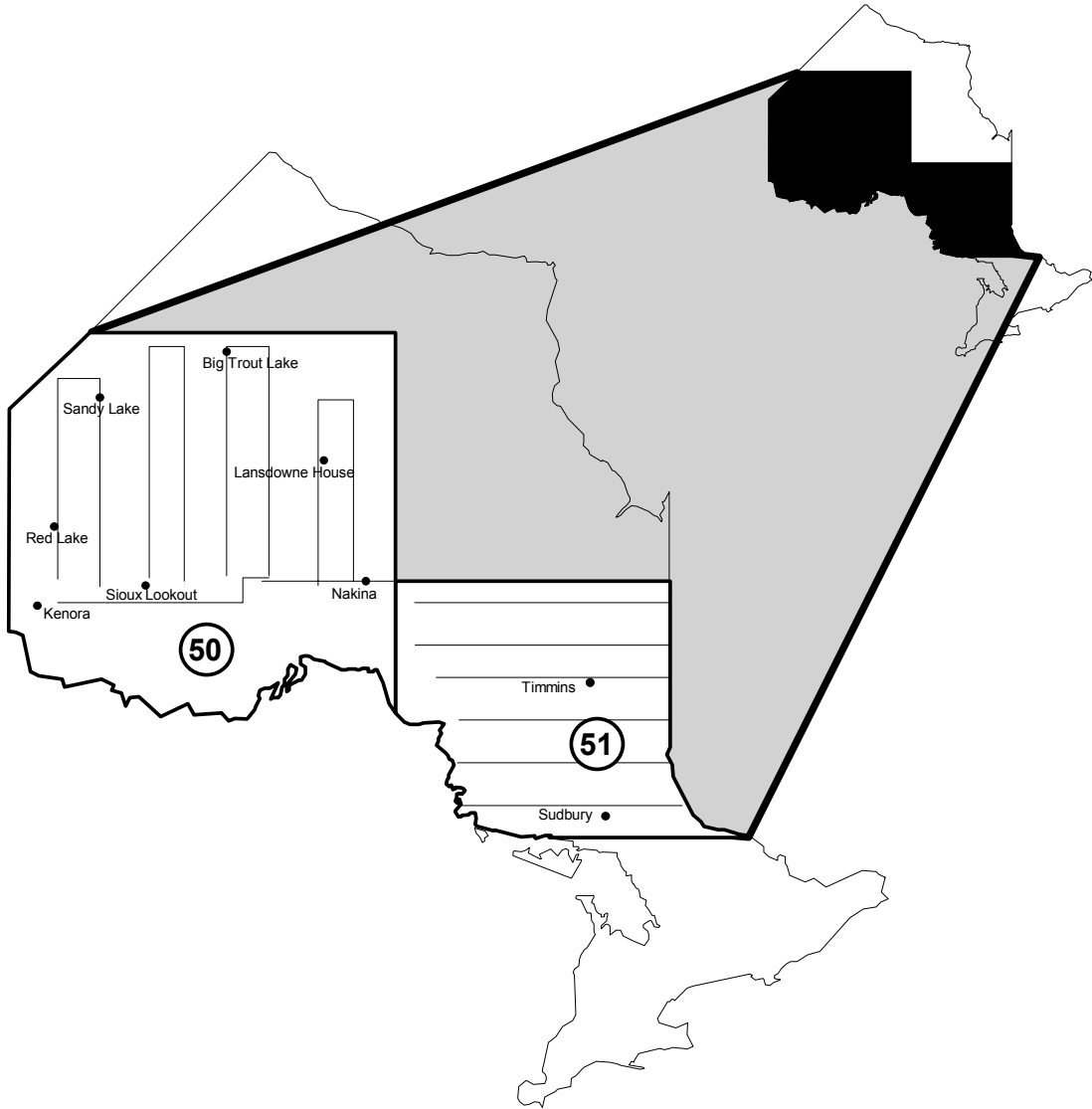


# WESTERN AND CENTRAL ONTARIO

## Waterfowl Breeding Population Survey

2002



The data presented in this report are preliminary. Final estimates are available from the U.S. Fish and Wildlife Service, Office of Migratory Bird Management, Patuxent Wildlife Research Center, Laurel, Maryland 20708-4016.

**Waterfowl Breeding Population Survey**  
**Western Ontario**  
May 2002

Stratum Surveyed  
**50 & 51**

Survey Conducted and Data Supplied by  
**United States Fish & Wildlife Service**

Aerial Crews

Stratum 50 & 51

Pilot/Observer William I. Butler, USFWS  
Observer Burr Fisher, USFWS

**Abstract**

Western Ontario (Stratum 50) is included in the traditional Breeding Waterfowl and Habitat Survey. Initiated in conjunction with the Black Duck Joint Venture (NAWMP), 2002 marks the thirteenth year of surveys to determine breeding waterfowl population numbers of central Ontario (Stratum 51). A warm winter averaging 3.5° to 5°C above normal temperatures but with normal precipitation was followed by a persistently cold spring. Estimates of total ducks across western Ontario were up 131.8% from 2001. Notable increases were mallards up 136.7% from 2001, and black ducks up 142.3% from 2001 and 50.4% above the 10-year mean. In central Ontario, estimates of total ducks remained relatively unchanged up only 8.2% from 2001. However, mallards increased 59.6% and green-winged teal decreased 40.6% from 2001 in the central portions of the province. Estimates of Canada geese doubled (100.7%) from 2001 in Stratum 50, but decreased – 17% in Stratum 51.

**Methods**

The procedures followed in conducting the survey are detailed in the *Standard Operating Procedures for Aerial Waterfowl Breeding Ground Population and Habitat Survey*, Section III, revised April 1987. All crews included experienced personnel. The pilot-observer and observer were experienced in these strata, and had flown these areas for seven and three years respectively using a Cessna U206F fixed-wing aircraft equipped with amphibious floats.

Stratum 50 was first surveyed in 1955, and was sampled continuously until 1973 with the exception of 1971, and from 1986 to the present. Stratum 51 was developed in 1990 in conjunction with the Black Duck Joint Venture (NAWMP) and has since been surveyed continuously. Beginning in 1998, waterfowl and habitat data were collected using an aerial onboard computerized recording system designed to attribute each waterfowl observation with a

respective location recorded as a latitude/longitude position. Each data point (observation) is then logged along with the sample details, i.e. strata, transect, and segment, time, climatic conditions, and location.

## **Weather and Habitat**

### **Stratum 50**

This stratum lies north of Lake Superior, west of James Bay, and south of Hudson Bay in west central Ontario. The Stratum is characterized by rolling terrain with elevations of up to 2000 feet in the south gradually decreasing to below 1000 feet in the north. Habitat can be described as boreal forest with only a very small area in the southwestern part of the stratum suitable for agriculture. Logging is an important industry in the southern 1/3 of the stratum leaving intermixed stands of old and new growth. Some mining operations occur but mining is not a major industry in the stratum. The northern 2/3's stratum is above the sparsely populated line and is relatively untouched by man. Fly in fishing being a major industry in the area reflects this. Permanent water areas dominate the stratum with many large lakes connected by streams, marshes and muskegs. Lakes tend to decrease in size moving north in stratum and rivers flow towards Hudson Bay. In general water and habitat should vary only slightly over time with seasonal phenology being the most important factor in annual production.

### **Stratum 51**

This stratum lies north of Lake Huron, east of Lake Superior, south of James Bay, and east of the Quebec border along the Ottawa River. The stratum is characterized by rolling terrain in the east, central, and northern sections with more severe terrain in the south and west. Habitat can be described as boreal forest, mixed with some farmland in the center and east (commonly referred to as the clay belt). Logging is common throughout the area, with mixed old and new growth. Extensive mining operations are also visible on the landscape, but are concentrated mainly on the southern half. Permanent water areas are common with many large to small lakes connected by streams, marshes, and muskegs. Water and habitat should vary only slightly over time.

The winter in central Ontario was warm with temperatures averaging 3.5° to 5° C above normal and snow fall within the normal range. Temperatures fell below normal spring conditions and persisted, but precipitation amounts remained within normal parameters. Habitat conditions in eastern (Stratum 51) and western Ontario (Stratum 50) were influenced by generally late spring. In Stratum 50, lakes were generally ice free and nesting habitat was available when the survey crew reached the area on May 5th. However, the weather was unusually cold and wet with periodic snow showers in northern portions of the area through late May. Western Ontario (Stratum 50) experienced an even later spring. As late as May 18<sup>th</sup>, one half of the large lakes in the southern portions of the Stratum remained 50% to 80% ice covered. Large lakes in the northern areas were 100% frozen. Rivers, marshes, and shallow lakes were open, but habitat availability was restricted as cool temperatures resulted in skim ice cover every morning. Weather in western Ontario was also wet where several inches of snow was received and remained in Pickle Lake on 15 May.

Overall it was not a good year for waterfowl production in Central Ontario. Even though nesting habitat was available in eastern Ontario (Stratum 51), cold wet weather through the end of May resulted in only fair conditions for waterfowl production. Weather conditions were cold and wet in the southern half of western Ontario (Stratum 50) with partially frozen conditions restricting the availability of nesting habitat also resulting in only fair conditions for waterfowl production. The cold wet weather combined with extensive frozen conditions restricting habitat availability until late May resulted in poor habitat conditions for waterfowl production in northwestern Ontario.

Birds in western Ontario were delayed in the southern portions of Stratum 50 due to frozen conditions farther north. Waterfowl, particularly mallards and black ducks, were concentrated in open areas and not dispersed to optimum nesting areas providing a greater opportunity to detect these species from the air. Thus, the increase in numbers observed this year probably does not reflect an actual single year increase in the population for these species. To the extent more birds were observed, production would still be projected to be generally poor due to cold-wet weather conditions and restricted habitat availability.

## Breeding Populations

Estimates of total ducks across the survey area were up 131.8% and up 15.8% from last year in strata 50 and 51 respectively. Dabbling ducks increased 144.1% and decreased -18.1% in strata 50 and 51 respectively from 2001 levels. In Stratum 50, abundances of mallards and black ducks increased 136.7% and 142.3 % from last year, both climbing above the 10-year mean. In contrast, mallards and black ducks decreased -28.3% and -21.6% respectively from last year in Stratum 51 bringing them -28.6% and -42.6% below their long-term averages (1990 - 2001). Numbers of Canada geese increased significantly from last year (100.7% and 100% in Strata 50 and 51 respectively).

Table 1. Survey design for Ontario

Survey Design	50	51
Square miles in stratum	176,609	78,680
Linear miles in sample	2,358	1,512
Number of segments in sample	135	84
Expansion Factor	290.71	208.15

Appendix 1. Long-term trend in adjusted waterfowl breeding population estimates (thousands) for Western Ontario.

Species/Ponds	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Ducks										
Dabblers										
Mallard	41.2	183.8	69.4	144.0	127.3	196.9	163.6	362.1	185.7	220.0
Am. black duck	6.8	18.4	0.0	9.0	18.6	10.2	30.4	59.9	19.4	29.7
Gadwall	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	4.3
Am. wigeon	17.8	10.3	0.0	0.0	0.0	3.2	16.0	32.0	11.1	16.3
Am. green-winged teal	0.0	0.0	0.0	0.0	9.6	0.0	5.9	14.2	19.2	24.1
Blue-winged teal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4
N. shoveler	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
N. pintail	0.0	9.6	0.0	0.0	9.7	6.8	3.0	0.0	3.5	0.0
Subtotal	65.8	222.1	69.4	153.0	168.1	219.0	218.9	468.2	238.8	301.8
Divers										
Redhead	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0
Canvasback	0.0	0.0	0.0	32.3	0.0	121.5	7.3	0.0	1.7	1.9
Scaups	16.6	252.8	74.8	69.1	92.9	73.7	83.7	61.5	60.9	78.3
Ring-necked duck	40.2	1.5	0.0	0.0	0.0	1.9	1.9	99.2	67.6	34.2
Goldeneyes	13.5	39.1	0.0	41.4	227.1	42.8	71.8	190.0	124.0	77.2
Bufflehead	8.3	16.0	0.0	16.9	6.1	16.2	9.3	17.4	25.8	0.0
Ruddy Duck	0.0	0.0	0.0	0.0	0.0	0.0	25.0	10.0	0.0	0.0
Subtotal	78.6	309.3	74.8	159.7	326.0	262.2	198.8	378.1	280.0	191.6
Miscellaneous										
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scoters	15.8	12.4	1.4	0.0	0.0	6.1	2.0	0.0	2.8	0.0
Mergansers	94.0	71.6	68.0	165.8	53.5	160.7	85.3	108.9	109.5	89.1
Subtotal	109.8	84.0	69.4	165.8	53.5	166.9	87.4	108.9	112.3	89.1
Total Ducks	254.1	615.4	213.6	478.5	547.6	648.1	505.0	955.2	631.1	582.4
Canada Goose	17.0	14.8	0.0	0.0	0.0	9.3	0.0	15.3	5.3	0.0
Am. coot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Species/Ponds	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Ducks										
Dabblers										
Mallard	53.5	154.7	171.2	122.2	136.6	155.8	226.1	189.1	227.2	234.9
Am. black duck	17.4	7.1	18.6	45.7	34.2	15.5	25.9	46.6	43.8	25.7
Gadwall	0.0	0.0	11.2	0.0	0.0	0.0	1.9	0.0	1.8	1.9
Am. wigeon	19.8	18.5	4.2	35.7	10.0	0.0	28.2	10.3	24.9	31.1
Am. green-winged teal	0.0	11.0	12.5	5.0	0.0	50.4	21.8	7.6	7.4	26.0
Blue-winged teal	0.0	0.0	7.6	6.1	0.0	47.9	8.8	0.0	0.0	13.3
N. shoveler	0.0	0.0	5.2	0.0	0.0	0.0	0.5	0.0	0.0	1.0
N. pintail	0.0	1.7	0.0	4.8	3.1	4.6	3.0	5.6	6.2	2.8
Subtotal	90.8	193.1	230.6	219.5	183.9	274.3	316.3	259.1	311.3	336.8
Divers										
Redhead	0.0	0.0	0.0	0.0	1.8	0.0	1.0	0.0	0.0	1.0
Canvasback	0.0	0.0	1.9	0.0	0.0	0.0	5.9	0.0	0.0	5.6
Scaups	30.9	80.8	58.6	111.1	71.3	59.2	90.7	117.3	48.3	90.6
Ring-necked duck	35.6	162.0	60.0	2.0	18.3	35.6	46.8	16.9	32.7	56.2
Goldeneyes	5.0	70.2	53.4	347.3	102.7	65.0	101.0	153.4	181.3	102.2
Bufflehead	3.1	4.3	6.6	51.3	36.0	84.9	21.6	18.6	28.3	22.6
Ruddy Duck	0.0	0.0	0.0	3.5	0.0	3.5	1.8	0.0	3.5	1.8
Subtotal	74.6	317.3	180.4	515.2	230.1	248.1	268.9	306.1	294.1	280.0
Miscellaneous										
Oldsquaw	0.0	0.0	0.0	4.7	0.0	0.0	0.3	1.2	0.0	0.3
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scoters	0.0	2.8	0.0	68.4	8.4	10.5	16.9	26.4	11.8	17.4
Mergansers	62.8	144.6	158.0	118.9	171.4	115.5	125.0	147.3	104.4	130.4
Subtotal	62.8	147.4	158.0	192.0	179.8	126.0	142.2	174.9	116.2	148.1
Total Ducks	228.2	657.8	569.0	926.7	593.8	648.4	727.4	740.1	721.5	764.9
Canada Goose	34.2	1.8	16.2	22.8	33.4	25.4	22.7	13.1	12.7	26.0
Am. coot	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.9

Appendix 1 continued. Long-term trend in adjusted waterfowl breeding population estimates (thousands) for Western Ontario.

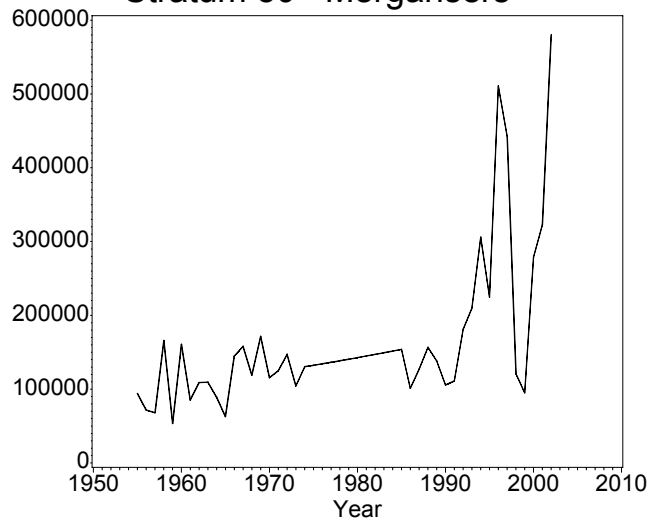
Species/Ponds	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Ducks										
Dabblers										
Mallard	238.4	242.5	246.8	251.1	255.2	259.0	262.3	265.1	267.5	269.7
Am. black duck	25.6	25.5	25.4	25.4	25.4	25.4	25.5	25.5	25.5	25.5
Gadwall	1.9	1.9	1.9	1.9	1.8	1.7	1.6	1.5	1.3	1.2
Am. wigeon	32.0	32.8	33.6	34.3	34.8	35.0	35.0	34.7	34.3	33.8
Am. green-winged teal	27.4	29.0	30.6	32.4	34.2	36.0	37.9	39.7	41.5	43.2
Blue-winged teal	15.0	16.7	18.3	20.0	21.5	22.9	24.2	25.3	26.3	27.1
N. shoveler	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	2.9
N. pintail	2.8	2.7	2.6	2.6	2.5	2.4	2.2	2.1	1.9	1.7
Subtotal	344.3	352.4	360.9	369.3	377.3	384.6	391.1	396.5	401.0	405.0
Divers										
Redhead	1.0	1.0	0.9	0.9	0.8	0.7	0.6	0.4	0.2	0.0
Canvasback	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9	4.8	4.7
Scaups	90.6	90.7	90.8	90.9	91.1	91.3	91.6	91.9	92.3	92.7
Ring-necked duck	59.4	62.7	65.9	69.1	72.3	75.5	78.6	81.7	84.8	87.8
Goldeneyes	102.5	102.8	103.1	103.4	103.6	103.7	103.8	103.9	103.9	103.8
Bufflehead	23.0	23.5	24.1	24.7	25.3	25.8	26.3	26.6	26.8	26.9
Ruddy Duck	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.4
Subtotal	283.9	287.9	291.9	295.9	299.9	303.8	307.5	311.0	314.3	317.4
Miscellaneous										
Oldsquaw	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scoters	17.2	17.0	16.9	16.7	16.5	16.3	16.0	15.5	15.0	14.2
Mergansers	132.3	134.3	136.3	138.4	140.5	142.7	144.9	147.1	149.3	151.6
Subtotal	149.9	151.7	153.5	155.4	157.4	159.3	161.2	162.9	164.6	166.1
Total Ducks	778.1	792.0	806.3	820.7	834.6	847.7	859.7	870.4	879.9	888.5
Canada Goose	27.2	28.4	29.6	30.9	32.2	33.6	35.0	36.5	38.0	39.6
Am. coot	2.3	2.6	2.9	3.2	3.5	3.8	4.1	4.4	4.6	4.8

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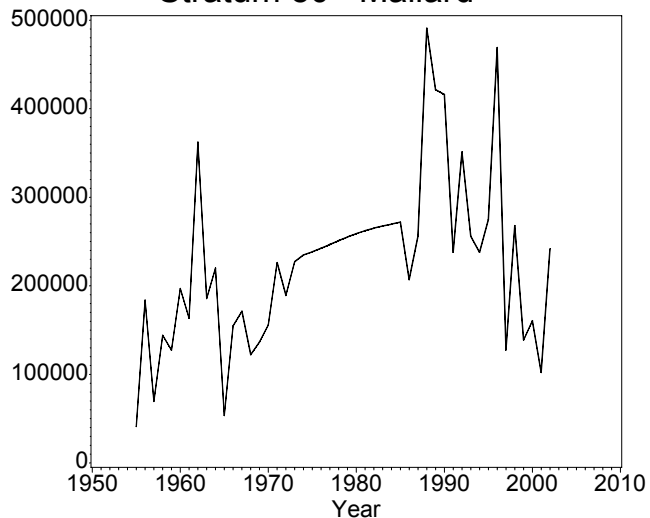
Appendix 1 continued. Long-term trend in adjusted waterfowl breeding population estimates (thousands) for Western Ontario.

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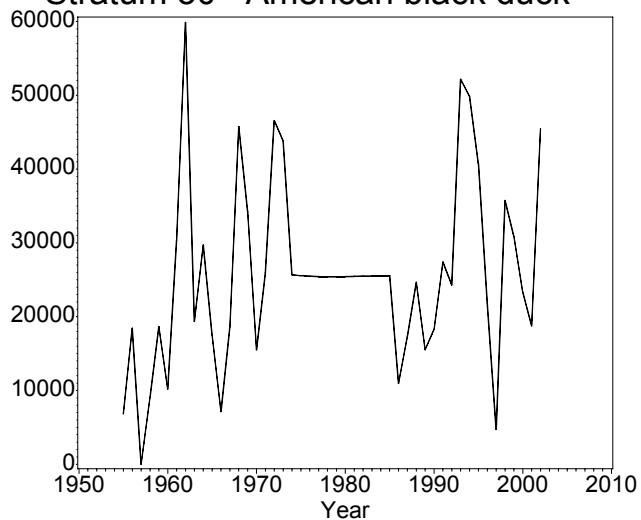
Stratum 50 Mergansers



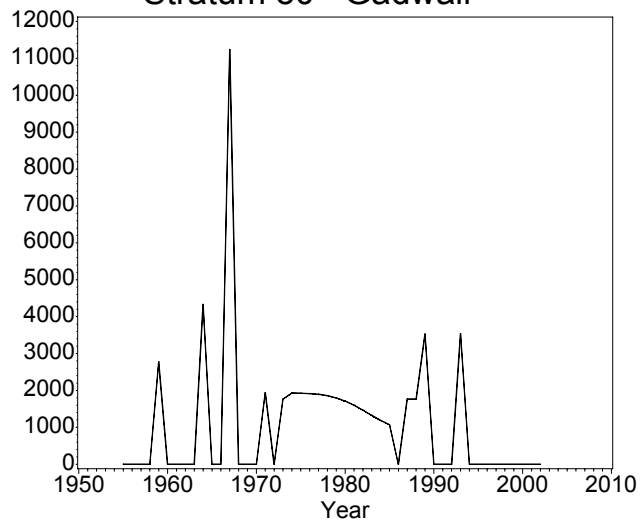
Stratum 50 Mallard



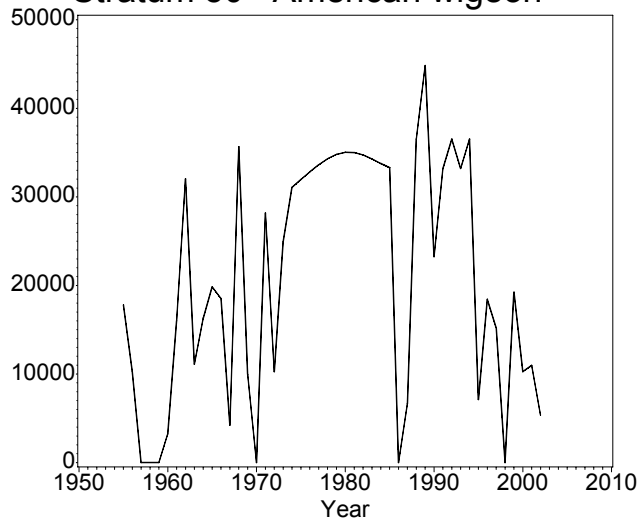
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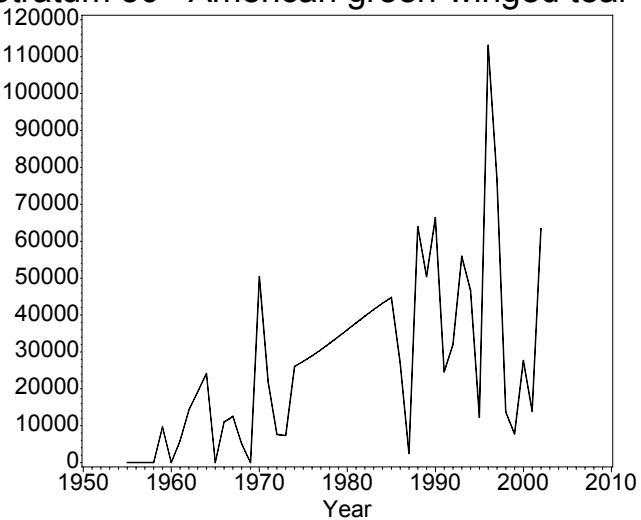
Stratum 50 Gadwall



Stratum 50 American wigeon

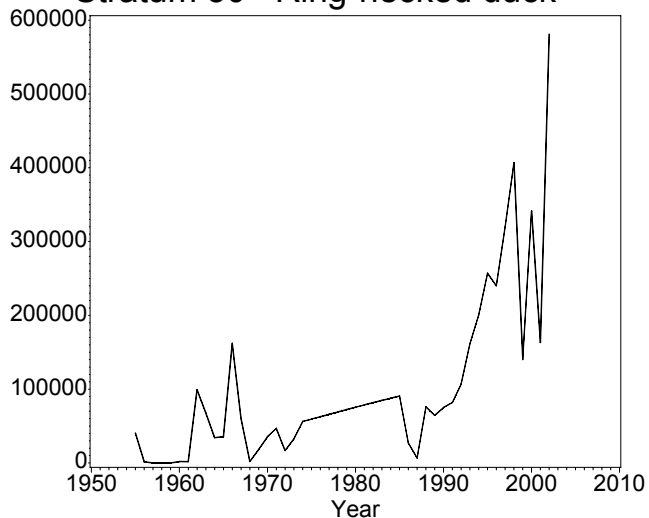


Stratum 50 American green-winged teal

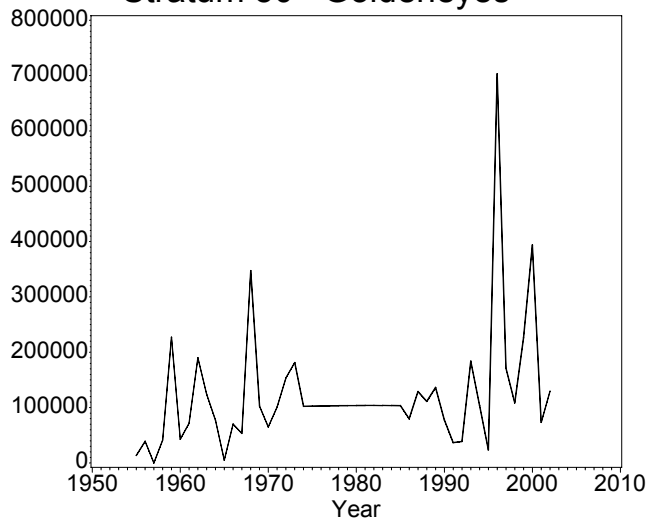




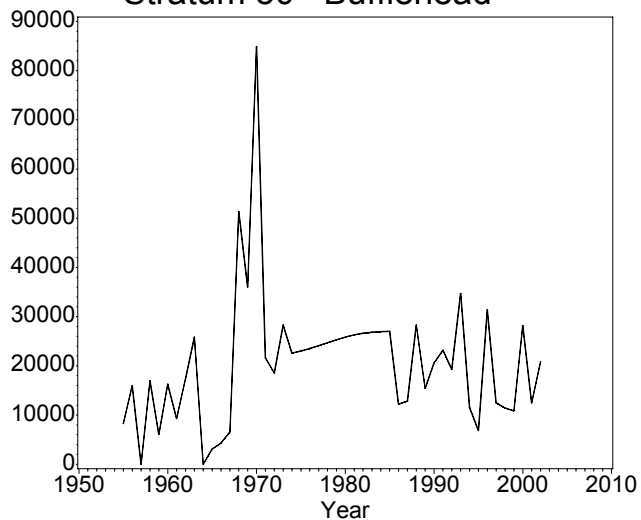
Stratum 50 Ring-necked duck



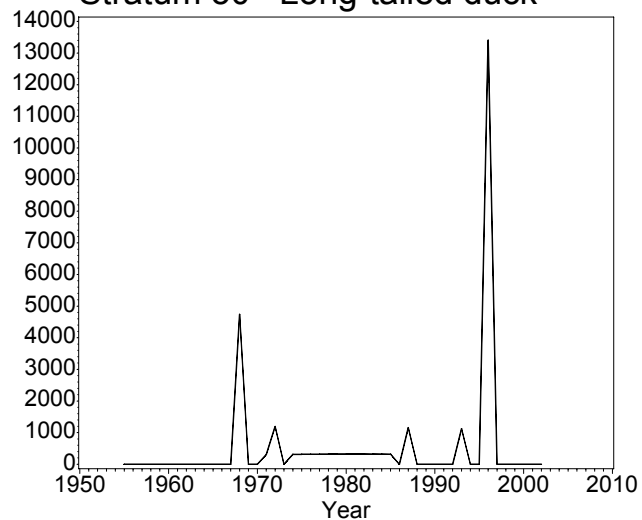
Stratum 50 Goldeneyes



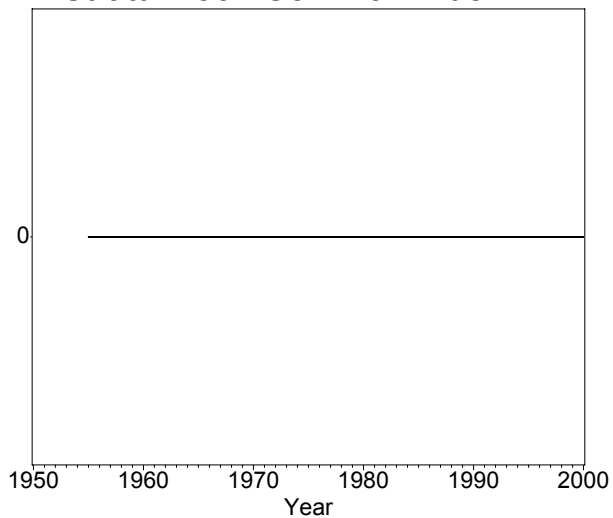
Stratum 50 Bufflehead



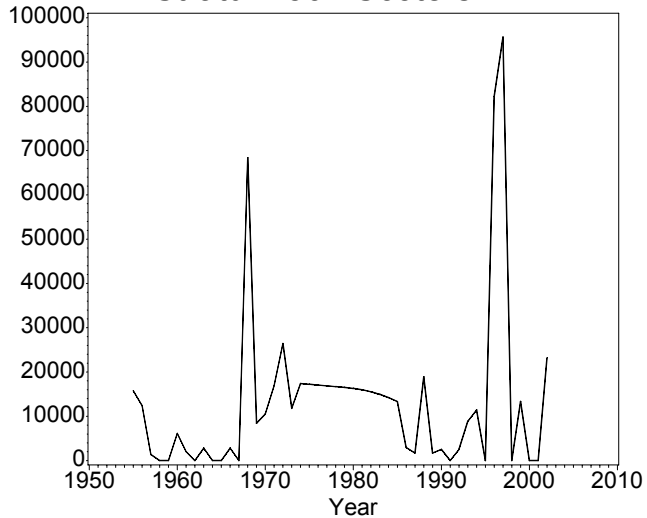
Stratum 50 Long-tailed duck



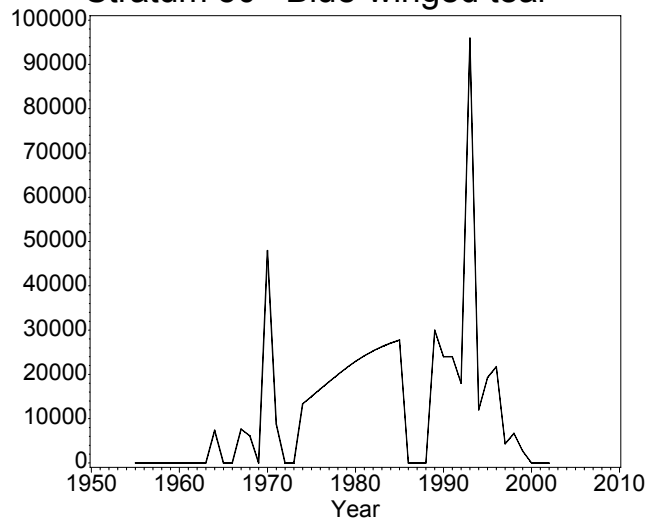
Stratum 50 Common Eider



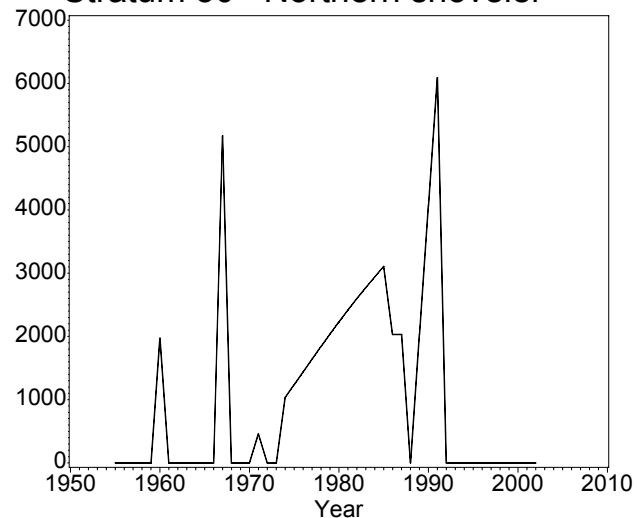
Stratum 50 Scoters



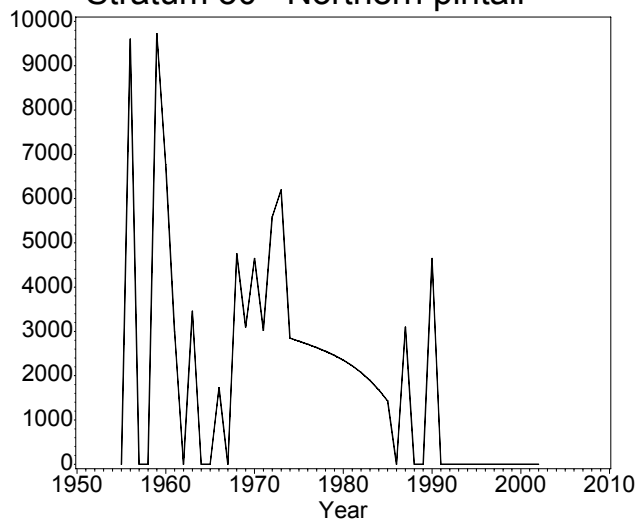
Stratum 50 Blue-winged teal



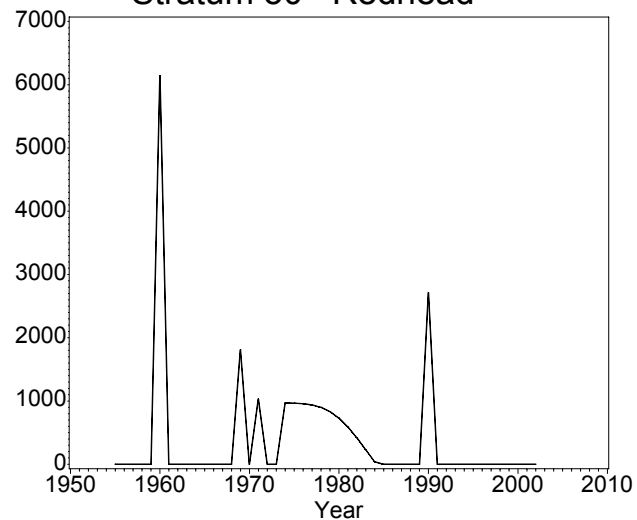
Stratum 50 Northern shoveler



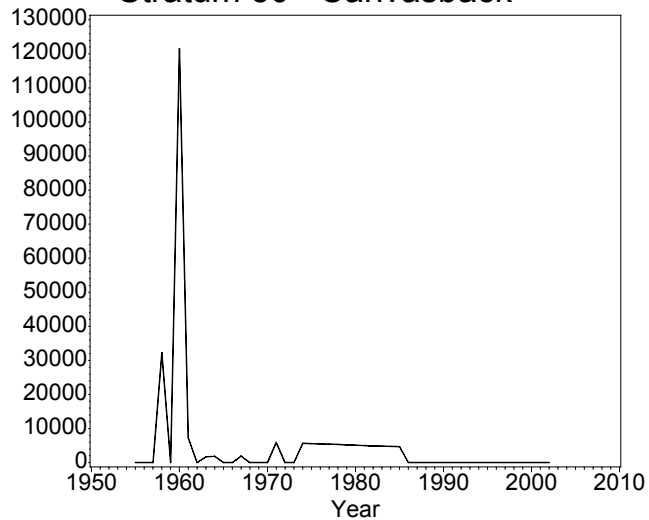
Stratum 50 Northern pintail



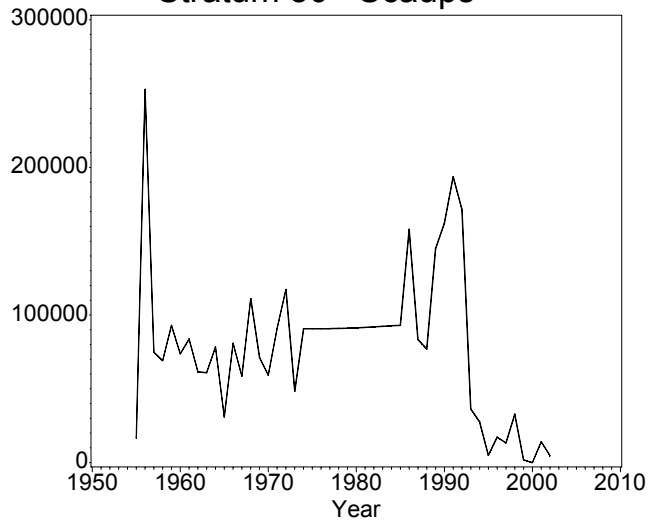
Stratum 50 Redhead



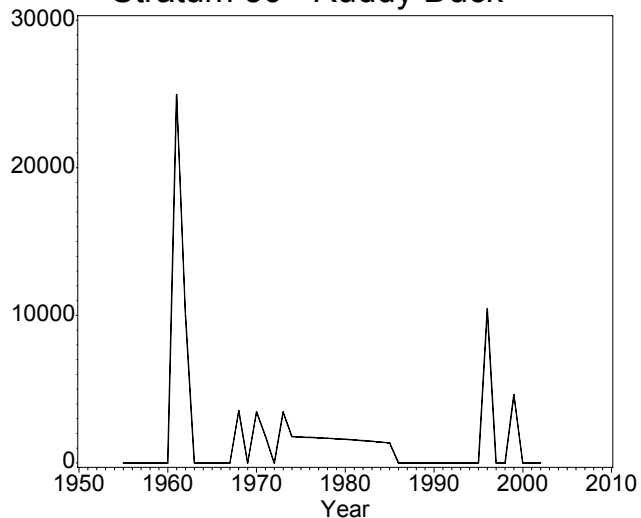
Stratum 50 Canvasback



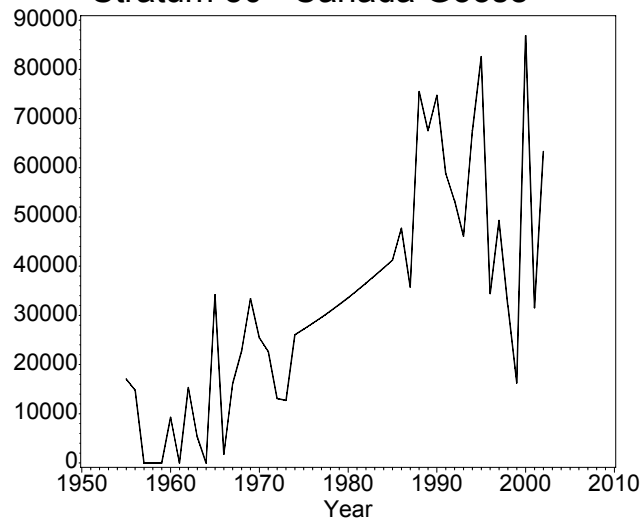
Stratum 50 Scaups



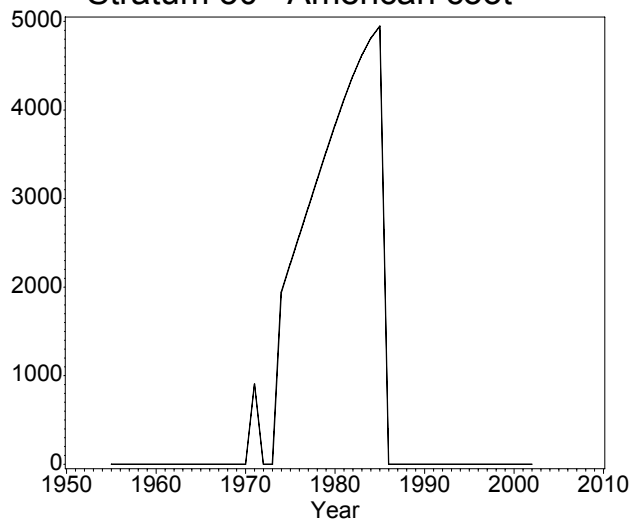
Stratum 50 Ruddy Duck



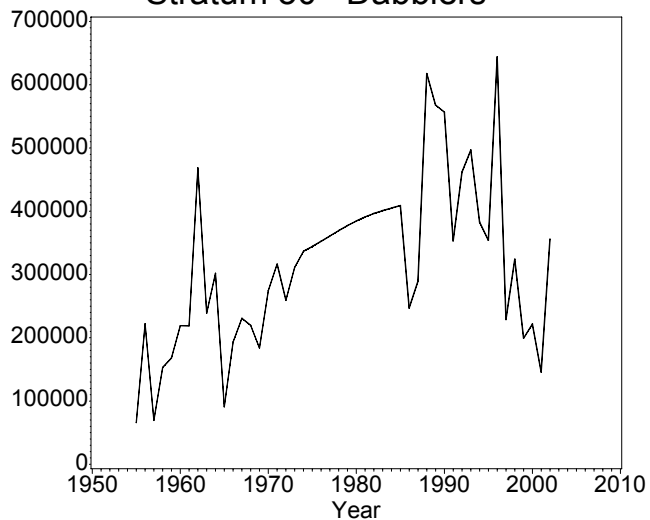
Stratum 50 Canada Goose



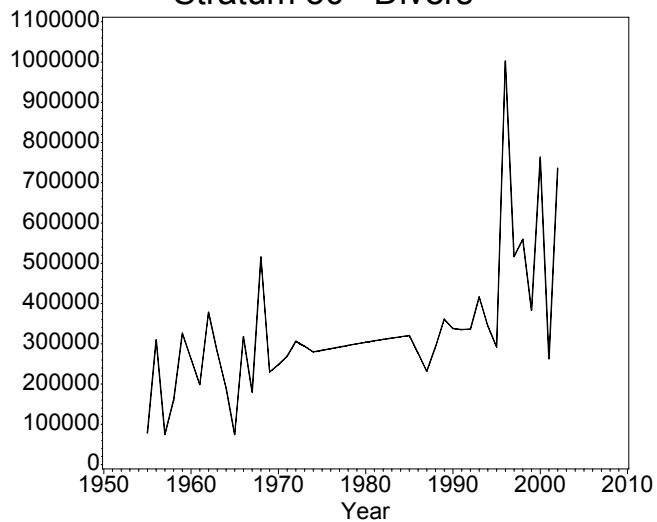
Stratum 50 American coot



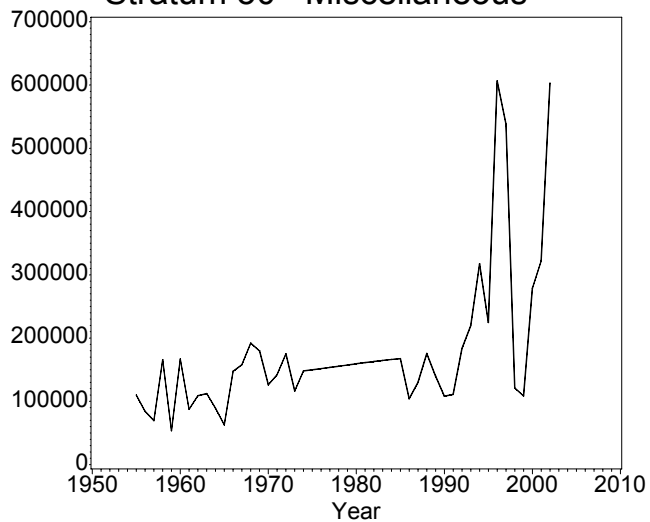
Stratum 50 Dabblers



Stratum 50 Divers



Stratum 50 Miscellaneous



Stratum 50 Total Ducks

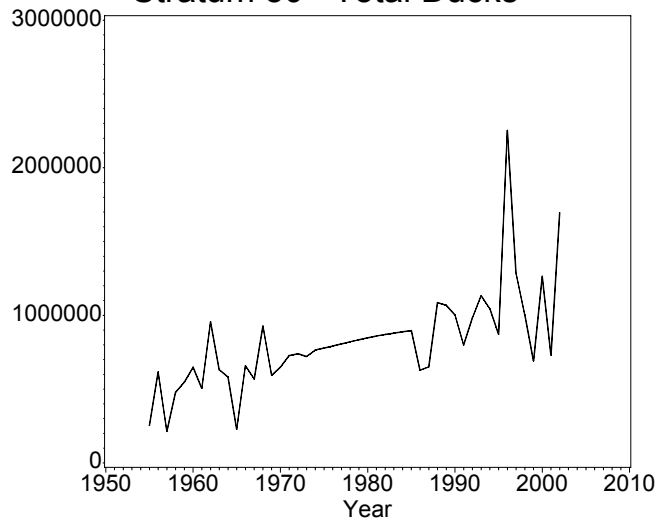


Table 2. Status of waterfowl breeding population estimates (thousands, adjusted for visibility bias) and stratum with comparisons against the previous year, the previous 10-year mean, and the long-term mean for Western Ontario.

Species/Ponds	Stratum	% Change From						
	50	2002 Total	2001 Total	10-Year Mean	Long- Term Mean	2001	10-Year Mean	Long- Term Mean
Ducks								
Dabblers								
Mallard	241.8	241.8	102.1	238.6	225.7	136.7%	1.3%	7.1%
Am. black duck	45.4	45.4	18.8	30.2	25.1	142.3%	50.4%	81.1%
Gadwall	0.0	0.0	0.0	0.4	1.1	--	-100.0%	-100.0%
Am. wigeon	5.4	5.4	11.0	18.7	21.2	-51.1%	-71.4%	-74.6%
Am. green-winged teal	63.5	63.5	14.0	40.0	26.5	354.7%	58.7%	139.4%
Blue-winged teal	0.0	0.0	0.0	18.1	12.7	--	-100.0%	-100.0%
N. shoveler	0.0	0.0	0.0	0.0	1.0	--	--	-100.0%
N. pintail	0.0	0.0	0.0	0.0	2.1	--	--	-100.0%
Subtotal	356.0	356.0	145.8	345.9	315.4	144.1%	2.9%	12.9%
Divers								
Redhead	0.0	0.0	0.0	0.0	0.4	--	--	-100.0%
Canvasback	0.0	0.0	0.0	0.0	5.0	--	--	-100.0%
Scaups	4.6	4.6	14.1	32.0	80.2	-67.4%	-85.6%	-94.3%
Ring-necked duck	580.9	580.9	163.2	233.7	89.6	255.9%	148.6%	548.7%
Goldeneyes	129.9	129.9	73.2	202.6	122.2	77.5%	-35.9%	6.3%
Bufflehead	20.8	20.8	12.5	17.9	20.5	66.6%	16.0%	1.2%
Ruddy Duck	0.0	0.0	0.0	1.5	1.7	--	-100.0%	-100.0%
Subtotal	736.2	736.2	263.0	487.7	319.6	179.9%	51.0%	130.4%
Miscellaneous								
Long-tailed duck	0.0	0.0	0.0	1.5	0.5	--	-100.0%	-100.0%
Eiders	0.0	0.0	0.0	0.0	0.0	--	--	--
Scoters	23.2	23.2	0.0	21.4	13.2	--	8.3%	75.9%
Mergansers	580.0	580.0	322.5	269.2	155.0	79.8%	115.4%	274.1%
Subtotal	603.2	603.2	322.5	292.1	168.8	87.0%	106.5%	257.4%
Total Ducks	1695.4	1695.4	731.4	1125.7	803.7	131.8%	50.6%	110.9%
Canada Goose	63.3	63.3	31.5	50.0	32.0	100.7%	26.7%	98.1%
Am. coot	0.0	0.0	0.0	0.0	0.9	--	--	-100.0%

Table 3. Status of waterfowl breeding population estimates (thousands, adjusted for visibility bias) bias species and stratum, with comparisons against the previous year and the long-term mean for Central Ontario.

Species/Ponds	Stratum	% Change From				
	51	2002 Total	2001 Total	1990-2001 Mean	2001	1990-2001 Mean
Ducks						
Dabblers						
Mallard	53.6	53.6	74.8	75.1	-28.3%	-28.6%
Am. black duck	33.1	33.1	42.2	57.6	-21.6%	-42.6%
Gadwall	0.0	0.0	0.0	0.1	--	-100.0%
Am. wigeon	3.8	3.8	3.8	7.0	0.0%	-44.9%
Am. green-winged teal	19.5	19.5	13.7	35.2	42.9%	-44.5%
Blue-winged teal	0.0	0.0	0.0	4.5	--	-100.0%
N. shoveler	0.0	0.0	0.0	0.1	--	-100.0%
N. pintail	0.0	0.0	0.0	0.0	--	--
Subtotal	110.1	110.1	134.5	179.6	-18.1%	-38.7%
Divers						
Redhead	0.0	0.0	0.0	0.1	--	-100.0%
Canvasback	0.0	0.0	0.0	0.0	--	--
Scaups	19.0	19.0	115.4	11.5	-83.6%	64.8%
Ring-necked duck	133.8	133.8	84.4	124.2	58.6%	7.7%
Goldeneyes	87.8	87.8	46.5	94.5	88.9%	-7.1%
Bufflehead	14.0	14.0	10.0	17.4	40.2%	-19.5%
Ruddy Duck	13.6	13.6	0.0	0.0	--	--
Subtotal	268.2	268.2	256.2	247.7	4.7%	8.3%
Miscellaneous						
Long-tailed duck	0.0	0.0	0.0	1.7	--	-100.0%
Eiders	0.0	0.0	0.0	0.0	--	--
Scoters	0.0	0.0	0.0	2.6	--	-100.0%
Mergansers	208.6	208.6	115.9	101.4	80.0%	105.8%
Subtotal	208.6	208.6	115.9	105.8	80.0%	97.2%
Total Ducks	587.0	587.0	506.7	533.1	15.8%	10.1%
Canada Goose	15.1	15.1	7.6	9.5	100.0%	58.7%
Am. coot	0.0	0.0	0.0	0.1	--	-100.0%

Appendix 2. Long-term trend in adjusted waterfowl breeding population estimates (thousands) for Central Ontario.

Species/Ponds	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Ducks										
Dabblers										
Mallard	35.6	47.3	97.1	81.2	68.6	17.9	86.4	62.2	166.2	116.8
Am. black duck	57.9	60.3	86.8	75.4	57.1	63.3	64.5	29.7	44.7	72.0
Gadwall	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Am. wigeon	2.2	10.3	8.7	0.0	4.3	0.0	14.5	8.8	16.6	14.3
Am. green-winged teal	18.3	20.5	24.6	25.4	62.3	51.8	74.4	53.5	38.5	16.3
Blue-winged teal	9.5	3.7	24.7	6.2	3.0	6.9	0.0	0.0	0.0	0.0
N. shoveler	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N. pintail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	125.1	142.1	243.2	188.1	195.3	139.9	239.8	154.2	266.0	219.3
Divers										
Redhead	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Canvasback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scaups	0.6	1.7	2.7	1.8	1.5	0.0	0.0	6.5	7.8	0.0
Ring-necked duck	41.7	113.3	145.7	184.3	64.7	101.5	192.4	171.2	114.8	173.7
Goldeneyes	59.3	117.9	141.4	67.5	44.3	3.6	115.1	62.0	44.7	276.5
Bufflehead	41.5	53.9	16.6	4.1	6.8	0.0	21.6	11.0	11.8	21.1
Ruddy Duck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	143.0	286.8	306.4	257.8	117.3	105.1	329.1	250.7	179.1	471.3
Miscellaneous										
Oldsquaw	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	0.0
Eiders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scoters	1.9	5.6	2.1	0.0	18.3	0.0	0.0	3.2	0.6	0.0
Mergansers	88.0	157.1	66.8	109.5	86.4	139.2	190.2	81.4	39.6	51.4
Subtotal	100.5	162.8	68.9	109.5	104.7	139.2	190.2	84.7	50.6	51.4
Total Ducks	368.6	591.6	618.5	555.4	417.4	384.3	759.1	489.6	495.7	742.0
Canada Goose	1.8	8.1	11.5	10.2	10.0	7.6	13.8	10.6	8.5	15.4
Am. coot	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Species/Ponds	2000	2001	2002
Ducks			
Dabblers			
Mallard	46.8	74.8	53.6
Am. black duck	37.8	42.2	33.1
Gadwall	0.0	0.0	0.0
Am. wigeon	0.0	3.8	3.8
Am. green-winged teal	23.0	13.7	19.5
Blue-winged teal	0.0	0.0	0.0
N. shoveler	0.0	0.0	0.0
N. pintail	0.0	0.0	0.0
Subtotal	107.6	134.5	110.1
Divers			
Redhead	0.6	0.0	0.0
Canvasback	0.0	0.0	0.0
Scaups	0.0	115.4	19.0
Ring-necked duck	102.4	84.4	133.8
Goldeneyes	155.7	46.5	87.8
Bufflehead	10.4	10.0	14.0
Ruddy Duck	0.0	0.0	13.6
Subtotal	269.2	256.2	268.2
Miscellaneous			
Oldsquaw	0.0	0.0	0.0
Eiders	0.0	0.0	0.0
Scoters	0.0	0.0	0.0
Mergansers	91.3	115.9	208.6
Subtotal	91.3	115.9	208.6
Total Ducks	468.1	506.7	587.0
Canada Goose	9.1	7.6	15.1
Am. coot	0.0	0.0	0.0